

**INTEL INVENTION DISCLOSURE**  
**ATTORNEY-CLIENT PRIVILEGED COMMUNICATION**  
 located at <http://legal.intel.com/patent/index.htm>

**27946**

DATE: 6-14-02

TMG-TM/ICG/OPG/OPD

It is important to provide accurate and detailed information on this form. The information will be used to evaluate your invention for possible filing as a patent application. **Invention Disclosure forms MUST be sent electronically via email to your manager/supervisor who should then forward with their approval to our email account "invention disclosure submission."** If you have any questions, please call 8-264-0444.

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		Phone #: 510-578-5637

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Supervisor: DANA ROSE	WWID: 10456448	M/S: TB2
		Phone #: 510 578-5627

Last Name: OEN	First Name: JOSHUA	M.I. T
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City: FREMONT	State: CA	Zip: 94536
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Supervisor: STEVE BUCHHEIT	WWID: 10965253	M/S: TB2
		Phone #: 510 578-5610

**EXHIBIT I**  
**Page 1 of 4**

**(PROVIDE SAME INFORMATION AS ABOVE FOR EACH ADDITIONAL INVENTOR)**

2. Title of Invention: OPTICAL XPAK TO XENPAK ADAPTER

3. What technology/product/process (code name) does your invention relate to (be specific if you can)

Related product name Xenpak & Xpak

4. Include several key words to describe the technology area of the invention in addition to # 3 above:  
Xpak MSA , Xenpak MSA , 10gig transponder,

5. Stage of development (i.e. % complete, simulations done, test chips if any, etc.):  
Product currently in conceptual stage

6a. Has a description of your invention been (or planned to be) published outside of Intel: Not at this time

If YES, was the manuscript submitted for pre-publication approval through the Author Incentive Program:

If YES, please identify the publication and the date published:

6b. Has your invention been used/sold or planned to be used/sold by Intel or others? Planned to be released

If YES, date it was sold or will be sold: Alpha samples in November, 2002 time frame

6c. Does this invention relate to technology that is or will be covered by a SIG (special interest group)/standard or specification?

No

If YES, name of SIG/standard/specification:

6d. If the invention is embodied in a semiconductor device, actual or anticipated date of tapeout?

Not applicable

6e. If the invention is software, actual or anticipated date of any beta tests outside Intel:

Not applicable

7. Was the invention conceived or constructed in collaboration with anyone other than an Intel blue badge employee or in performance of a project involving entities other than Intel (e.g. government, other companies, universities or consortia)? NO: NO If YES, name of individual or entity:

8. Is this invention related to any other invention disclosure that you have recently submitted? If so, please give the title and inventors: NO

\*\*\*\*\*  
**PLEASE READ AND FOLLOW THE DIRECTIONS ON  
HOW TO WRITE A DESCRIPTION OF YOUR INVENTION**

Try to limit your description to 2-3 pages  
Do NOT attach a presentation, white paper, or specification  
**ANSWER ALL OF THE QUESTIONS BELOW**

**EXHIBIT I**  
**Page 2 of 4**

**Please provide a description of the invention and include the following information:**

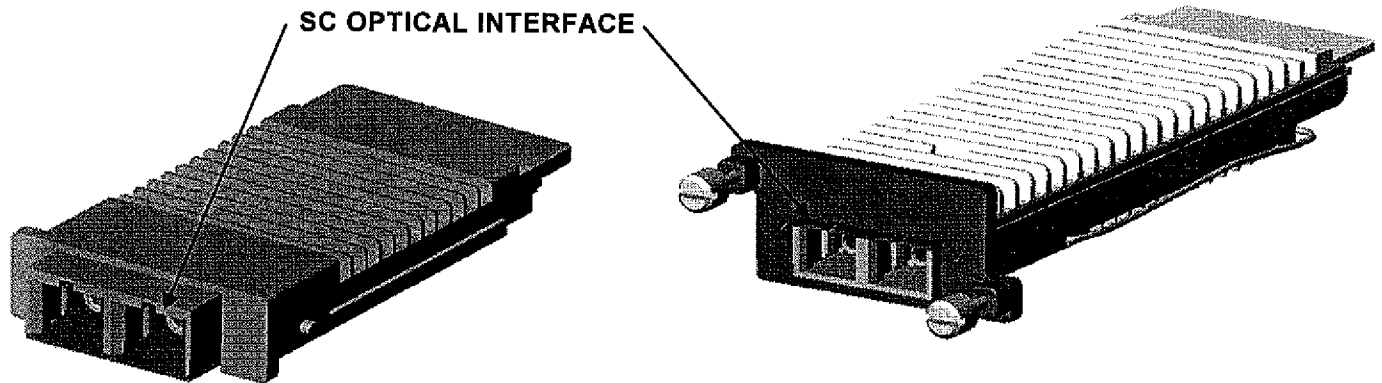
1. **Describe in detail what the components of the invention are and how the invention works.**  
Currently the Xenpak and Xpak modules are designed independently without any interchangeability of parts. The proposed concept is to make the functionality of the PC board

assembly be adaptable to both products and change the mechanical features in order to satisfy both product requirements. The proposed concept will allow a PC board assembly from the Xpak to be used in the Xenpak Transponder. The PC board assembly is designed to fit the Xpak module, but for the Xenpak module the same PC board assembly will create an incorrect position of the Optical interface. The key in allowing the transformation of a Xpak PC board to be used in a Xenpak is an Optical Patchcord. The Optical patchcord is the equivalent of an electrical extension cord and can allow the outside connector interface to be at a different location with respect to the PC board mounted optics.

2. **Describe advantage(s) of your invention over what is currently being done.**

The advantage of having a common PC board assembly is, reduced part cost, same basic assembly process, testing and qualifying protocol can be consolidated, common programming scheme, product characteristics are similar for customer...etc.

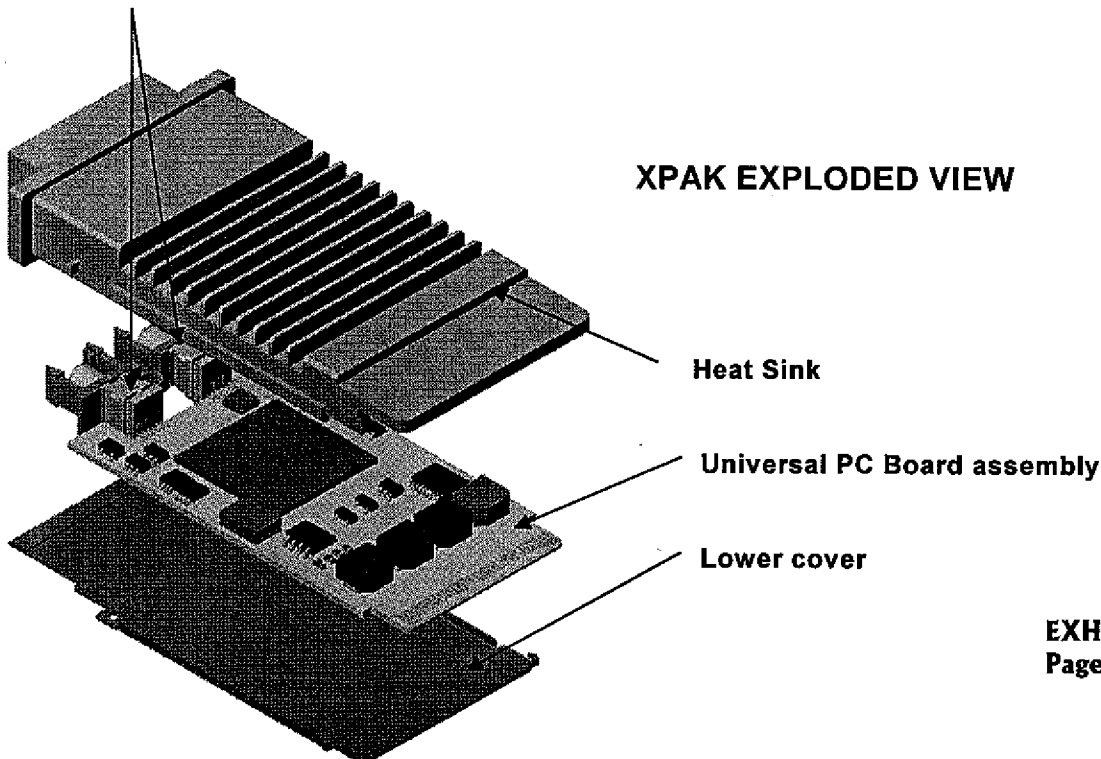
3. **You MUST include at least one figure illustrating the invention. If the invention relates to software, include a flowchart or pseudo-code representation of the algorithm.**



**XPAK 10Gbits / Transceiver**

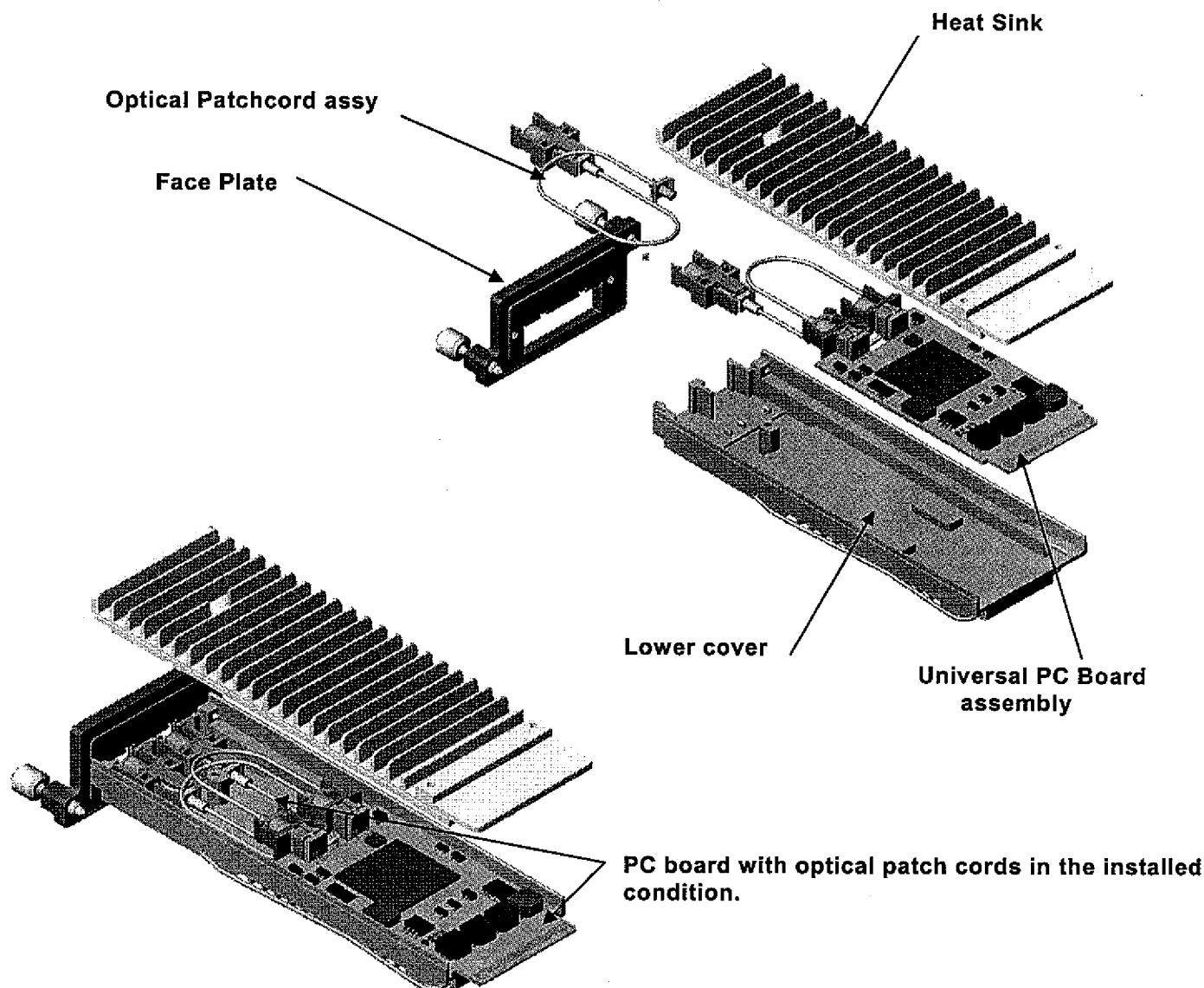
**XENPAK 10Gbits / Transceiver**

**PC BOARD MOUNTED OPTICS**



**XPAK EXPLODED VIEW**

## XENPAK EXPLODED VIEW



4. **Value of your invention to Intel (how will it be used?).** By satisfying the two different markets with one solution (internally) Intel can eliminate most of the development cost of a new product.
5. **Explain how your invention is novel. If the technology itself is not new, explain what makes it different.** Currently the industry solves this type of problem by developing two different solutions for two products. This proposal will allow two different products to share a common core part, the PC board assembly.
6. **Identify the closest or most pertinent prior art that you are aware of.** None that we are aware of.
7. **Who is likely to want to use this invention or infringe the patent if one is obtained and how would infringement be detected?** Our competitors, Picolight, Infineon, JDSU, Agere, Mitsubishi, Hitachi and other transponder manufacturing companies

**HAVE YOUR SUPERVISOR READ AND FORWARD IT ELECTRONICALLY  
VIA E-MAIL TO "INVENTION DISCLOSURE SUBMISSION"**

**EXHIBIT I  
Page 4 of 4**

DATE: \_\_\_\_\_ SUPERVISOR: \_\_\_\_\_

BY APPROVING, I (SUPERVISOR) ACKNOWLEDGE THAT I HAVE READ AND UNDERSTAND THIS  
DISCLOSURE, AND RECOMMEND THAT THE HONORARIUM BE PAID

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  - 22) OED Home
  - 23) SPEED Online
  - 24) To repair a damaged Personal...
  - 25) Water - login
  - 26) WSA
  - 27) Personal
  - 28) Tool equipment

THEATHERMOMECHANICAL	38857	6/27/2004	PUBLISHED	NO
OPTICALMEMS	28831	11/25/2002	PENDING	NO
OPTICALMEMS	27978	10/16/2002	ISSUED	NO
CIRCUITS	27971	10/15/2002	DECLINE	
OPTICALMEMS	27837	10/6/2002	DECLINE	
OPTICALMEMS	27946	10/6/2002	PENDING	NO
THEATHERMOMECHANICAL	28832	7/15/2002	PUBLISHED	
OPTICALMEMS	21732	9/14/2001	PENDING	NO
OPTICAL XPAK TO XENPAK ADAPTER				



# New Client / Matter Form

Page 1

Date	11/6/2003	<input type="radio"/> NEW CLIENT	Client	110578
Prepared By:	af	<input checked="" type="radio"/> EXISTING CLIENT	Matter	110578-135407

## CLIENT INFORMATION

Client Model: *			
Client Name 1: *	INTEL LEGAL - PPG/OPTICAL-MEMS		
Client Name 2:			
Address Line 1: *	INTEL CORPORATION		
Address Line 2:	DAVID SIMON		
Address Line 3:	CHIEF PATENT COUNSEL		
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Address Line 5:	2200 MISSION COLLEGE BLVD		
Address Line 6:	SANTA CLARA, CA 95052		
City:	SANTA CLARA	State:	CA
Postal Code:	95052	Country:	
International Prefix No:		Phone No:	(408) 765-6886
		Fax No:	
SS/Tax ID:			
Contact Name:			
Contact Title:			
Contact Email Address:			
Domestic / International:	<input checked="" type="checkbox"/> D	Add To Timekeeper's Contact List:	<input type="checkbox"/>

Notes: NEED C/M and file on a RUSH BASIS, PLEASE. Please only create a trifold with side colored barcode sticker and white barcode sticker on it. Check file out to supervising attorney, but deliver to me. Thanks. - Allison Fahl

WFM\_1018

EXHIBIT III  
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